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APRIL 1992
QUARTERLY RESIDENTIAL WELL SAMPLING REPORT

IDAHO POLE COMPANY SITE

BOZEMAN, MONTANA

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DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES

STAN STEPHENS, GOVERNOR

FAX # (406) 443-7312

STATE OF MONTANA

OFFICE LOCATION: Steamboat Block
616 Helena Avenue, Rm. 302
Telephone: (406) 449-4067

MAILING ADDRESS: Cogswell Building
Helena, MT 59620

Solid & Hazardous Waste Bureau

September 27, 1992

Harold Chambers
Montana State Library
Capitol Complex
Helena, MT 59620

Dear Mr. Chambers:

Subject: Idaho Pole Superfund site remedial investigation/feasibility study (RI/FS) April 1992 Residential Sampling Report, MDHES, September 1992.

Enclosed are 4 copies of the *Report*. The *Report* details sampling and analytical results for residential wells near the Idaho Pole Superfund site.

The *Report* will be entered into the Administrative Record. MDHES has been conducting quarterly sampling of selected residences near the treating facility. The Idaho Pole Company has agreed to assume the quarterly residential monitoring beginning in September 1992. Analytical results will be distributed as they are made available to MDHES and EPA.

Should you require additional information concerning the Idaho Pole Superfund site, please contact me at 1-800-648-8485 (Montana only) or 406-449-4067.

Sincerely,

Kevin Kirley

Kevin Kirley, State Project Officer

enclosure

cc: Jim Harris, EPA-MO

"AN EQUAL OPPORTUNITY EMPLOYER"

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APRIL, 1992 QUARTERLY RESIDENTIAL WELL SAMPLING REPORT
IDAHO POLE COMPANY SITE - BOZEMAN, MONTANA

Introduction and Background

The Montana Department of Health and Environmental Sciences (MDHES) conducted its third quarterly round of private well groundwater sampling at residences downgradient from the Idaho Pole Company (IPC) Site on April 30, 1992. Sampling activities were conducted in accordance with the MDHES IPC Residential Well Sampling Workplan, September, 1991. Previous quarterly sampling events have been conducted by MDHES contractors and the Environmental Protection Agency (EPA) since commencement of Remedial Investigation activities.

The purpose of sampling was to provide valid laboratory analytical data to determine levels of pentachlorophenol (PCP) in the groundwater supply used by area residents. At this time, sampling is being conducted as an aquifer monitoring program only, and remedial actions to protect human receptors are not currently provided by MDHES. Private well sampling is needed to help determine the full extent of PCP groundwater contamination emanating from the IPC Site, to identify a source of potential health risks to area residents, and to aid in the selection of appropriate remedies for final cleanup and restoration of the aquifer.

Sampling and Laboratory Procedures

Figure 1 shows the eight private wells (Res-1,2,3,4,5,7,8,9) that were sampled during the previous rounds. Figure 2 shows the four additional wells (Res-6,10,11,12) that were sampled in April, 1992. One duplicate sample from Res-8 was collected and submitted blind to the laboratory. A trip blank also accompanied the sample set.

At least three well volumes were purged from each well to insure that a representative groundwater sample was being drawn from the aquifer. All pertinent sampling information, including date, time, sample number, sample location, sampling method, personnel, and other comments, were documented in a bound field notebook. Samples were shipped via overnight courier to the MDHES Chemistry Laboratory.

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https://archive.org/details/quarterlyresiden1992mont

Representatives from IPC were present to collect split samples. To date, IPC has not provided written results of sampling activities to MDHES.

All MDHES samples were analyzed for PCP by the Chemistry Laboratory Bureau using EPA method 8150 (see Attachment A). The laboratory performed a laboratory blank analysis for this sampling round and PCP was not detected. One sample was extracted in duplicate and analyzed separately, indicating reproducible results. A surrogate spike was also performed and was within recovery limits. MSE, Inc., reviewed the laboratory analytical data and provided MDHES with a data validation summary (Attachment B).

Results

All but one of the private wells sampled did not contain PCP above the method detection limit of .05 micrograms per liter (ug/l). Three samples were collected from one residence (Res-8) from an outside tap, a bathtub tap connected to an in-line reverse osmosis (RO) system, and a kitchen drinking water tap connected to the RO and carbon filtration systems. The outside tap sample contained PCP at 5.69 ug/l. The bathtub and kitchen tap samples did not contain PCP above the method detection limit of .05 ug/l. The sample collected from the outside tap exceeded the EPA's proposed Maximum Contaminant Level of 1.0 ug/l for PCP. All residents were sent a letter describing the results of their well water samples.

MDHES may continue sampling to help adequately assess seasonal changes in groundwater plume dynamics and amounts of PCP in the groundwater. Further questions regarding sampling activities may be directed to Kevin Kirley, MDHES Project Officer, at 1-800-648-8465.

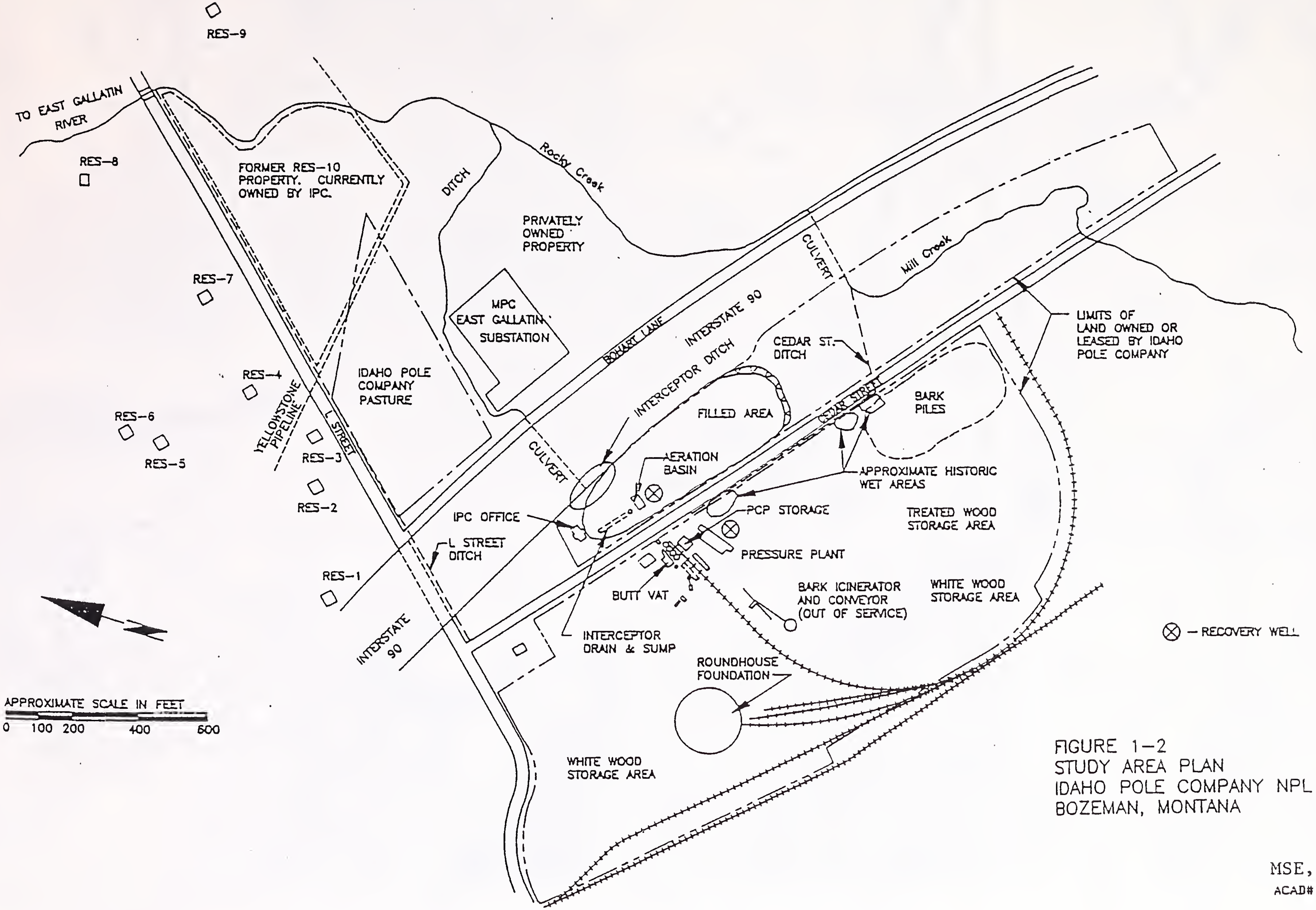

FIGURE 1–2
STUDY AREA PLAN
IDAHO POLE COMPANY NPL SITE
BOZEMAN, MONTANA

MSE, Inc.
ACAD# B90M0158
3-27-91
REV. -

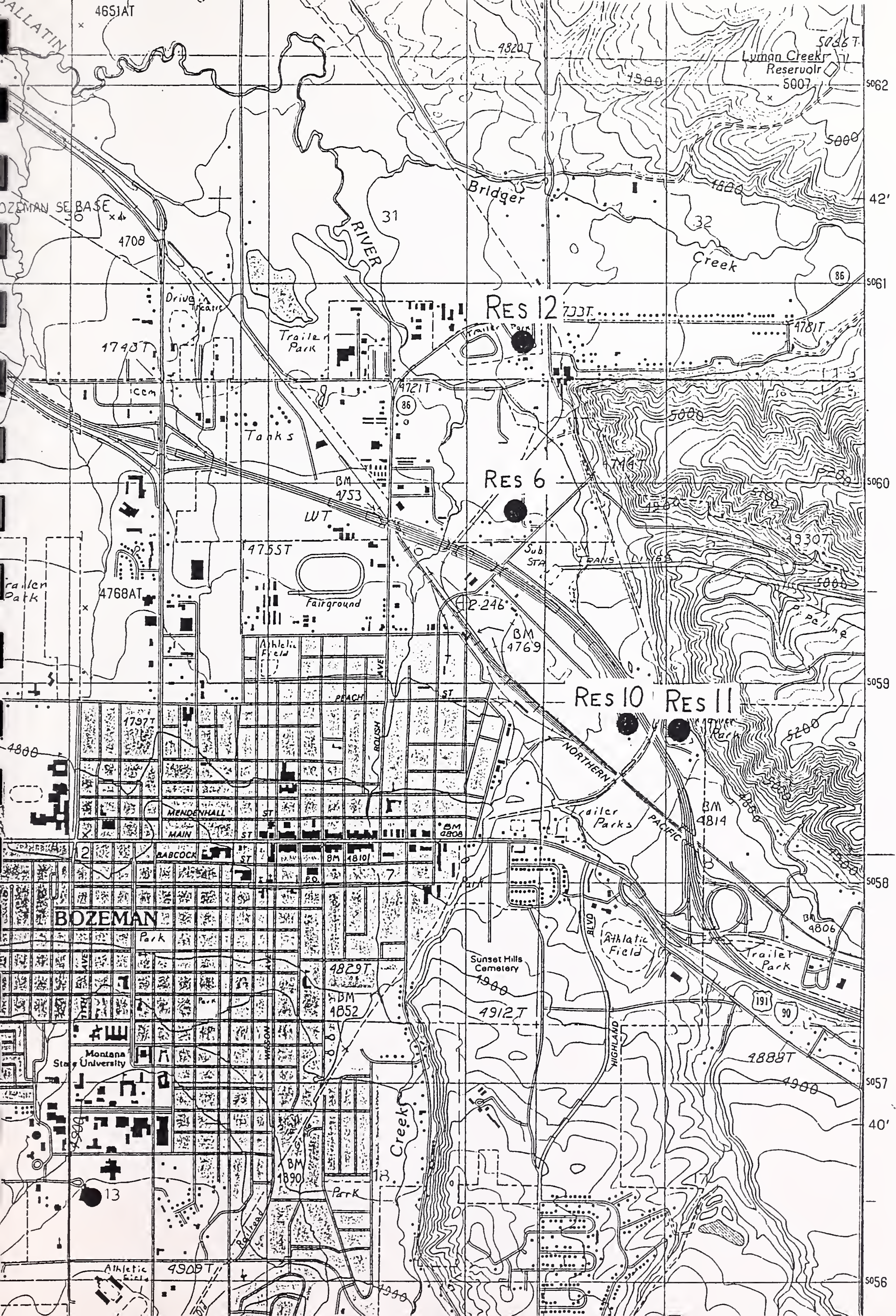
Res 12
Res 6
Res 10
Res 11
13
GALLATIN
4651AT
BOZEMAN SE BASE
4708
4743T
Drive in Theatre
Trailer Park
Cem
Tanks
BM 4753
WT
4755T
4768AT
Trailer Park
Fairground
Athletic Field
4721T
86
4820T
4900
Lyman Creek Reservoir
5036T
5007
5062
Bridger
RIVER
31
32
Creek
42' 30"
5061
4733T
4781T
5000
4900
5060
4930T
Sub STA
TRANS LINES
Pipeline
2-246
BM 4769
PEACH ST
BOUSH AVE
5059
4797T
4800
MENDENHALL ST
MAIN ST
BABCOCK ST
BM 4808
BM 4810
PO
BOZEMAN
Park
NORTHERN PACIFIC
Trailer Parks
BM 4814
5200
5058
BLVD
Athletic Field
BM 4806
Trailer Park
191
90
Sunset Hills Cemetery
4900
4912T
4829T
BM 4852
Park
WILSON
HIGHLAND
Montana State University
4888T
4900
5057
40'
Creek
BM 4890
18
17
Park
Railroad
Athletic Field
4909T
4900
5056

FIGURE 2

ATTACHMENT A

SOLID WASTE MANAGEMENT BUREAU MONTANA DEPT. OF HEALTH & ENV. SCIENCES

CHAIN OF CUSTODY SAMPLE HANDLING FROM THE FIELD TO THE LAB

SAMPLER'S LOG SHEET

(This sheet is retained by the sample collector)

A. Sample identities (description of sampling site and number of bottles collected at each site):
1. 4271-PW-A1 ONE 1l GLASS AMBER
2. 4271-PW-07
3. 4271-PW-06
4. 4271-PW-05
5. 4271-PW-02 *
6. 4271-PW-04

B. Date and time each sample collected:
1. 4-30-92 08:15
2. 09:45
3. 10:20
4. 10:25
5. 10:40
6. 11:20

C. Sampler's signature and organization: J. M. Mukelty, MDHES

D. Signature, occupation and address of Witness to sampling (if witnessed): ______

E. Means of transport to the laboratory (hand delivery by sampler, bus, mail, etc.), time and date sent: Greyhound Bus

F. Seal number (if sealed): 100

G. Transfer Section: Custody of samples transferred to another person: YES or [✓ NO]
(If YES, fill out transfer information)

Signature and organization of person receiving sample custody: Douglas R. Miller
Chem Lab State of MT
Date and time sample custody transferred: May 1, 1992 ; 1015

H. Name of laboratory receiving samples: MDHES CHEM. LAB
Date and time samples received: ______ ; ______

I. Sampler's remarks:
* Split w/ Hydrometrics

SOLID WASTE MANAGEMENT BUREAU MONTANA DEPT. OF HEALTH & ENV. SCIENCES

CHAIN OF CUSTODY SAMPLE HANDLING FROM THE FIELD TO THE LAB

SAMPLER'S LOG SHEET

(This sheet is retained by the sample collector)

A. Sample identities (description of sampling site and number of bottles collected at each site):
1. 4271-PW-03 ☆ ONE 1 l GLASS AMBER
2. 4271-PW-08A ☆ ↓
3. 4271-PW-08B
4. 4271-PW-08C
5. 4271-PW-08D
6. 4271-PW-01

B. Date and time each sample collected:
1. 4-30-92 11:25
2. ↓ 11:50
3. 11:40
4. 11:50
5. 11:40
6. 12:25

C. Sampler's signature and organization: J. M. Mihalitz, MDHES

D. Signature, occupation and address of Witness to sampling (if witnessed):

E. Means of transport to the laboratory (hand delivery by sampler, bus, mail, etc.), time and date sent: Greyhound Bus

F. Seal number (if sealed): 100

G. Transfer Section: Custody of samples transferred to another person: YES or [✓ NO]
(If YES, fill out transfer information)

Signature and organization of person receiving sample custody: Douglas L. Miller

~~May 1, 1992 1014~~ Chem Lab State of MT

Date and time sample custody transferred: May 1, 1992 ; 1014

H. Name of laboratory receiving samples: MDHES CHEM. LAB
Date and time samples received: ;

I. Sampler's remarks:
☆ Split w/ Hydrometrics

SOLID WASTE MANAGEMENT BUREAU MONTANA DEPT. OF HEALTH & ENV. SCIENCES

CHAIN OF CUSTODY SAMPLE HANDLING FROM THE FIELD TO THE LAB

SAMPLER'S LOG SHEET

(This sheet is retained by the sample collector)

A. Sample identities (description of sampling site and number of bottles collected at each site):
1. 4271-PW-09 * ONE 1l GLASS AMBER
2. 4271-PW-A2
3. 4271-PW-A3
4. 4271-TB-001
5.
6.

B. Date and time each sample collected:
1. 4-30-92 12:35
2. " 14:20
3. " 14:40
4. 4-28-92 –
5.
6.

C. Sampler's signature and organization: J. M. Michaletz, MDHES

D. Signature, occupation and address of Witness to sampling (if witnessed):

E. Means of transport to the laboratory (hand delivery by sampler, bus, mail, etc.), time and date sent: Greyhound Bus

F. Seal number (if sealed): 100

G. Transfer Section: Custody of samples transferred to another person: YES or [✓ NO]
(If YES, fill out transfer information)

Signature and organization of person receiving sample custody: Douglas L. Miller
Chem Lab State of MT
Date and time sample custody transferred: May 1 1992 ; 1016

H. Name of laboratory receiving samples: MDHES CHEM. LAB
Date and time samples received: ;

I. Sampler's remarks:
* Split w/ Hydrometrics

RECEIVED

AUG 5 1992

Montana Department of Health

CHEMISTRY LABORATORY BUREAU
DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

REPORT TO: Solid and Hazardous Waste Bureau

ATTENTION: Kevin Kirley

SUBJECT: Analytical results for Idaho Pole (April 30,1992 sampling)

Laboratory #:	Sample # or ID:	Sample Description:
SW 4898	4271-DW-A1	Aqueous
SW 4899	4271-DW-07	Aqueous
SW 4900	4271-DW-06	Aqueous
SW 4901	4271-DW-05	Aqueous
SW 4902	4271-DW-02	Aqueous
SW 4903	4271-DW-04	Aqueous
SW 4904	4271-DW-03	Aqueous
SW 4905	4271-DW-08A	Aqueous
SW 4906	4271-DW-08B	Aqueous
SW 4907	4271-DW-08C	Aqueous
SW 4908	4271-DW-08D	Aqueous
SW 4909	4271-DW-01	Aqueous
SW 4910	4271-DW-09	Aqueous
SW 4911	4271-DW-A2	Aqueous
SW 4912	4271-DW-A3	Aqueous
SW 4913	4271-TB-001	Aqueous

SAMPLE HANDLING INFORMATION:

SAMPLES SUBMITTED BY:	Joe Michaletz
DATE SAMPLES COLLECTED:	4-30-92
DATE RECEIVED IN LABORATORY:	5-1-92
DATE REPORTED BY LABORATORY:	5-26-92
RESPONSIBILITY CODE:	# 4271

	LABORATORY #		PENTACHLOROPHENOL (ug/L)	SURROGATE SPIKE RECOVERY (%)
	SW 4898		<.05	116%
	SW 4899		<.05	92%
	SW 4900		<.05	92%
	SW 4901		<.05	102%
	SW 4902		<.05	100%
	SW 4903		<.05	106%
	SW 4904		<.05	84%
- OUTSIDE	SW 4905		5.69	90%
- BATHTUB	SW 4906	"	<.05	81%
- KITCHEN	SW 4907	"	<.05	78%
- DUP. OF SW 4906	SW 4908	"	<.05	99%

LABORATORY #:	PENTACHLOROPHENOL ug/L	SURROGATE SPIKE RECOVERY (%)
SW 4909	<.05	95%
SW 4910	<.05	92%
SW 4910 SPIKE	6.47	92%
SW 4911	<.05	79%
SW 4911 DUPLICATE	<.05	86%
SW 4912	<.05	86%
SW 4913	<.05	96%
LAB BLANK	<.05	101%

METHOD:

EPA 8150

QUALITY ASSURANCE:

1. A laboratory blank was extracted and analyzed with no detectable amount of PCP.
2. Results were confirmed on two different chromatograph columns.
3. A check standard of pentachlorophenol was run with 106% recovery.
4. Sample SW 4910 was spiked with pentachlorophenol with a recovery of 108%.
5. Sample SW 4911 was extracted and analyzed in duplicate.

COMMENTS: Results were obtained via two different chromatograph columns. The reported results were averaged from these two sets of data.

REPORT SUBMITTED BY:

Bradford Towle

Bradford A. Towle
Chemist
CHEMISTRY LABORATORY BUREAU

ATTACHMENT B

IDAHO POLE COMPANY

April Residential Well Sampling

SAMPLE # 01-09
A1-A3

Holding times:

All samples met holding times.

Calibration:

1. Retention Window - Acceptable
2. Calibration Factors - Acceptable
3. Raw Data Confirms

Blank analysis:

1. No Detectable PCP
2. Raw Data Confirms

Lab control sample (blank spike):

1. Percent Recovery = 110 Percent - Acceptable
2. Raw Data Confirms

Surrogate recoveries (dcca methyl esler):

All Samples Meet Recovery Criteria

Matrix spike recovery:

1. Percent Recovery = 64.7 Percent
2. Raw Data Confirms

Duplicate analysis:

4911/4911 Dup
1. Both < 0.05 ug/L
2. RPD - Acceptable
3. Raw Data Confirms

Sample verification:

4898 - (PW-A1)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4899 (PW-07)
< 0.05 ug/L PCP
2. Raw Data Confirms

4900 (PW-06)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4901 (PW-05)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4902 (PW-02)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4903 (PW-04)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4904 (PW-03)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4905 (PW-08A)
1. 5.69 ug/L PCP
2. Raw Data Confirms

4906 (PW-8B)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4907 (PW-8C)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4908 (PW-8D)
1. < 0.03 ug/L PCP
2. Raw Data Confirms

4909 (PW-01)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4910 (PW-09)

1. < 0.05 ug/L PCP
2. Raw Data Confirms

4910 - SPIKE (PW-09)
1. 6.47 ug/L PCP
2. Raw Data Confirms

4911 (PW-A2)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4911 - DUP (PW-A2)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4912 (PW-A3)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

4913 (TB-001)
1. < 0.05 ug/L PCP
2. Raw Data Confirms

Overall Assessment of Data:

The Data is Acceptable without Qualification.